Study Report

A study of pattern of nonvenereal genital dermatoses of male attending skin OPD at a tertiary care center

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Abstract

Background: Nonvenereal dermatoses tend to create confusion from venereal dermatoses. This may be responsible for considerable concern to the patient as well as may cause diagnostic dilemma to the physicians. Nonvenereal dermatoses may not be restricted to genitalia alone; it may affect skin and mucous membrane also. Most of the patients with genital lesions had apprehension of suffering from some venereal disorders. **Aim:** The aim was to determine clinical and epidemiological pattern of nonvenereal dermatoses of male external genitalia. **Materials and Methods:** This was a descriptive study of 100 consecutive adult male patients with nonvenereal genital dermatoses attending skin and STD OPD at J A Group of Hospitals, Gwalior. Cases having any venereal dermatoses were excluded from this study. **Results:** The study included 100 male patients with nonvenereal genital lesions. A total of sixteen nonvenereal genital dermatoses were noted. The most common nonvenereal genital dermatoses were vitiligo (18%), pearly penile papule (16%), fixed drug eruptions (12%), scabies (10%), scrotal dermatitis (9%) and lichen planus (9%). Other dermatoses included sebaceous cyst, psoriasis, lichen sclerosus, plasma cell balanitis or Zoon's balanitis, granuloma annulare, lichen nitidus, lymphangioma circumscriptum, papulo-necrotic tuberculid, squamous cell carcinoma and tinea infections. The age ranged from 18 years to 65 years with majority in the age group of 21-30 years (40%). **Conclusion:** This study highlights the importance of diagnosing common nonvenereal genital dermatoses. It also helps in avoiding the general misconception that all genital lesions are sexually transmitted.

Key words: Nonsexually transmitted diseases, nonvenereal dermatoses, nonvenereal genital dermatoses

INTRODUCTION

Dermatoses involving genital areas are not always sexually transmitted. They can be divided into two groups: Venereal and nonvenereal dermatoses. The diseases, which are not sexually transmitted, are referred as nonvenereal dermatoses. Nonvenereal genital dermatoses, include a wide array of diseases with varied etiology.[1] They can either effect genitalia alone or may affect other body part also.[1]

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The nonvenereal dermatoses can be classified into five groups based on pathogenesis: Inflammatory diseases (psoriasis, seborrheic dermatitis, lichen planus), infections and infestations (scabies, dermatophytosis), congenital disorders (median raphe cyst), benign abnormalities (angiokeratoma of Fordyce, sebaceous cyst), premalignant and malignant lesions (eryrthroplasia of Queyrat, Squamous cell carcinoma).[2] As these groups includes various types of disorders, the identification of diseases is quite challenging.

These nonvenereal disorders are the cause of considerable concern to patients causing mental distress and guilt feeling in them. Nonvenereal dermatoses are quiet often a diagnostic dilemma to the treating physician, who has to effectively manage the condition and also allay the associated

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anxiety. Determining any causal or aggravating factor can save the patient from the agony of persistent discomfort and restrict social life, thereby considerably improving the Dermatology-specific quality of life. A comprehensive understanding of various presentation, there cause and appropriate management options is, therefore, essential. The study was to find the pattern of nonvenereal dermatoses presenting with genital lesions and to correlate its various parameters.

MATERIALS AND METHODS

A total of consecutive 100 male patients with genital lesions of nonvenereal origin, attending the Dermatology OPD at J A Group of Hospitals constituted the study group. All male patients >18 years of age who presented with genital complaints were screened for nonvenereal dermatoses. Informed consent was obtained. A detailed history including demographic data, chief complaints related to skin, onset and duration of disease and associated medical or skin disorders was elicited and recorded. History of sexual exposure was also recorded. Cases having any venereal diseases were excluded from the study.

The external genitalia was examined, and findings were noted. A detailed physical examination was done to see any associated lesions elsewhere in the body. Investigations such as Gram-stain, KOH mount, venereal disease research laboratory test, HIV test and histopathological examination were done as and when required establishing the diagnosis. A proforma was prepared to record the relevant details of patient, examination, investigations and diagnosis.

RESULTS

A total of 100 male patients with nonvenereal dermatoses of external genitalia were included in the study. The age of the patients ranged from 18 years to 65 years, with the mean age of 32.2 years. Most patients belong to the age group of 21-30 years (40%), followed by the age group of 31-40 years (20%). Seventy-four patients (74%) were from the urban area while twenty-six patients (26%) belong to rural background. Fifty-two (52%) patients were married and the remaining forty-eight (48%) patients were unmarried. Scrotum was involved in 60% and penis in 30% while both scrotum and penis were affected in 10% cases.

A total of sixteen types of nonvenereal dermatoses were noted in this study [Table 1]. The most common disorder was vitiligo [Figure 1] present in 18 cases, followed by pearly penile papule [Figure 2], which accounted for 16 cases. The other disorder encountered included fixed drug eruption (FDE) in 12; scabies [Figure 3] in 10, scrotal dermatitis [Figure 4] and lichen planus [Figure 5] in 9 cases each etc., [Table 1].

Figure 1: Genital vitiligo-depigmented macule over glans and prepuce

Figure 2: Pearly penile papule- asymptomatic discrete papules present over corona sulcus

Figure 3: Scabies-multiple nodules over glans

Table 1: Genital dermatoses

Genital dermatoses	Number (*n*=100)
Vitiligo	18
Pearly penile papule	16
Psoriasis	3
Scrotal dermatitis	9
Squamous cell carcinoma	1
Lichen planus	9
Dermatophytosis	5
Granuloma annulare	1
Scabies	10
Lichen nitidus	1
Fixed drug eruption	12
Sebaceous cyst	7
Lichen sclerosus	3
Lymphangiectasia scrotum	2
Zoon's balanitis	2
Papulo-necrotic tuberculid	1

Figure 4: Scrotal dermatitis

Figure 5: Lichen planus-violaceous annular plaques over glans penis

The common presenting features were itchy genitalia, de-pigmentation. Other complaints were pain, burning sensation, redness, exfoliation of the skin, raised lesions over the skin, oozing, ulceration, erosions and thickening of the skin. Some patients had more than one complaint.

DISCUSSION

As venereal dermatoses are of primary concern to the patient and causes mental stress and guilt feeling among patients, it is, therefore, utmost important to distinguish between venereal and nonvenereal dermatoses. Male patients with nonvenereal dermatoses usually present to genitor-urinary experts or physicians, where the training and expertise are not oriented to adequate dermatological diagnosis and treatment.[3] Disorders of genitalia have proved confusing to various specialists involved in the diagnosis and treatment. The problem is confounded by the fact that the normal characteristics of common diseases at flexural sites are lost or modified, making the diagnosis difficult for even an experienced dermatologist.

The nonvenereal dermatoses of male external genitalia include wide spectrum of disease with varied etiology.[4] There are very few comprehensive study on the pattern of nonvenereal dermatoses in males from our country.[5,6] Also, our study is first of its kind from this part of the country. Acharya *et al*.[5] had done a study of 200 patients with genital lesions of nonvenereal origin. Karthikeyan *et al*.[6] had done a study on the pattern of nonvenereal dermatoses of male external genitalia from South India. Khoo and Cheong[7] had done a similar study on male patients at Singapore.

The age ranged from 18 to 65 years in the present study with the mean age of 32.2 years whereas the age ranged from 9 to 70 years with a mean age 33.7 years in a study by Karthikeyan *et al*.[6]

Most of the patients belong to the age group of 21–30 years (40%) in the present study which is similar to Karthikeyan *et al*.[6]

A total of 16 different nonvenereal dermatoses were observed in this study [Table 1]. Karthikeyan *et al*.[6] had 25 different nonvenereal dermatoses in their study.

The most common disorder was genital vitiligo [Figure 1], which accounted for 18%, followed by pearly penile papule [Figure 2] in 16% and FDE in 12% cases in the present study. The study by Acharya *et al*.[5] reported infections as commonest disorder contributing 40% cases. Genital vitiligo as most common disorder (16%) was observed in an another study, which is almost similar to our study.[6]

Khoo and Cheong[7] had 14.3% pearly penile papule as most common nonvenereal dermatoses, which are similar to this study (16%).

Seventy-four patients (74%) were from the urban area while twenty-six patients (26%) belong to rural background. Fifty-two (52%) patients were married and the remaining forty-eight (48%) patients were unmarried. Scrotum was involved in 60% and penis in 30% while both scrotum and penis were affected in 10% cases in our study.

Genital vitiligo could be an exclusive finding, or it can be associated with generalized vitiligo. Genital vitiligo [Figure 1] accounted for 18% cases as commonest disorder in our study and is seen in all age group from young adult to older age group. This is in contrast with the study conducted by Karthikeyan *et al*.,[6] where the entire patients with vitiligo were in older age group. Ten patients in our study had associated vitiligo elsewhere while eight patients had only genital vitiligo. Duration of illness ranged from 3 months to 8 years.

Pearly penile papule is a common disorder found in up to 50% of men.[8] They were present in 16% cases in our study [Figure 2], which is almost similar to the study conducted by Khoo and Cheong[7] They are frequently mistaken as warts and misdiagnosed as Tyson's gland or ectopic sebaceous gland of Fordyce.[4] All the patients with pearly penile papule came to visit OPD in apprehension of some venereal disease. They were counseled about the benign nature of the disease.

Fixed drug eruptions were observed in 12% of cases in our study as third most common disorder. This is in contrast with Karthikeyan *et al*.,[6] where only 3 cases had FDE and all of them because of cotrimoxazole. In our study, various drugs were implicated such as, nonsteroidal antiinflammatory drugs, sulphonamides, ornidazole, fluconazole, ampicillin, etc., Half of our patients with FDE had oral involvement also.

Acharya *et al*.[5] in their study recorded scabies as most common nonvenereal dermatoses accounting for 30 cases (15%), while it was present in only 10% cases in our study [Figure 3]. This may be due to lesser prevalence of scabies in this population.

Lichen planus was present in 9% cases in our study that is in contrast [Figure 5] with Puri and Puri[9] where it was seen in only 6.6% (3) cases and Karthikeyan *et al*.[6] where it was seen in only 1 case. Four of our cases had involvement of the oral mucosa also.

Itching particularly around scrotum is a common presenting problem. Contributory factors include, tight clothing, friction, maceration, atopy, over-washing, use of various toiletries, topical medicaments and indigenous preparations.[10-12] Scrotal dermatitis [Figure 4] accounted for 9% cases in our study inclusive of allergic contact dermatitis, irritant contact dermatitis. Most of the patients were from the rural background. Acharya *et al*.[5] did not report any case while Karthikeyan *et al*.[6] had 13% cases of scrotal dermatitis.

Sebaceous cysts of scrotum [Figure 6] were observed in 7% cases in our study, while it was second most common finding (14%) by Karthikeyan *et al*.[6] They were observed in only 3.7% cases by Khoo and Cheong[7] All of our cases were asymptomatic and from younger age group.

Dermatophytic infection was present in 5% cases in our study as scaly pruritic plaques over scrotum. All of them were confirmed by KOH mount.

Lichen sclerosus (LS) is chronic inflammatory dermatoses which are associated with substantial discomfort and morbidity with an unknown etiology.[13] LS was observed in 3 cases in our study [Figure 7], while it was seen in only 2 cases by Karthikeyan *et al*.[6] All 3 cases had phimosis and were advised circumcision. Duration of illness ranged from 6 months to 3 years. Clinical findings in cases of LS in this study were found to be in concordance with the literature review.

Around 2% of the world population have psoriasis, but it is possible that many more could have ano-genital psoriasis at some time.[4] Also, psoriasis of ano-genital region can present alone. Genital appearance could be challenging to interpret,

Figure 6: Multiple sebaceous cysts scrotum

Figure 7: Lichen sclerosus-sclerosus and de-pigmentation of prepuce and glans with phimosis

Figure 8: Zoon's balanitis or plasma cell balanitis

Figure 9: Slightly translucent vesicles of lymphangiectasia scrotum

Figure 10: Squamous cell carcinoma with mutilation of whole penis

especially in uncircunscribed individuals because a mucosal site is affected rather than keratinized skin.[4] Psoriasis was encountered in 3% cases in our study. Karthikeyan *et al*.[6] reported a solitary case of psoriasis of glans penis while Acharya *et al*.[5] reported 5 cases of psoriasis over genitalia. All of our cases had classical lesions of psoriasis elsewhere.

Zoon's balanitis or plasma cell balanitis [Figure 8] was observed in 2% cases in this study that had not been reported by Acharya *et al*.,[5] Khoo and Cheong[7] Karthikeyan *et al*.[6] It is a disorder of middle and older age in uncircumcised male, the etiology remains unknown.[14]

Lymphangiectasia of scrotum [Figure 9] was seen in 2 cases. Both of them were due to filariasis. One case each of lichen nitidus, granuloma annulare, papulo-necrotid tuberculid and squamous cell carcinoma [Figure 10] were also observed in our study.

CONCLUSION

Contrary to normal belief all the lesions on genitalia are not sexually transmitted. It is very important to distinguish between venereal and nonvenereal genital dermatoses, as these nonvenereal disorders are a considerable concern to patients causing mental distress and feeling of guilt. Also, these nonvenereal disorders are quiet difficult in making a diagnosis by the treating physicians. A comprehensive understanding of the various presentations, their etiology is, therefore, essential. This study was quiet useful in understanding the epidemiological, clinical and etiological characteristics of various nonvenereal genital dermatoses. The most common etiological diagnosis in our study was vitiligo.

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